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IN THE CLAIMS

Claim 1. (Currently Amended) Deep rolling apparatus of a deep rolling machine for crankshafts, in which two arms across from each other bear a deep rolling head or a supporting roller head, whereby the supporting roller is provided with two supporting rollers with parallel axes and the deep rolling roller head with at least one deep rolling work roller whose axis of rotation has the same direction as the axis of rotation of the crankshaft and which encloses and forms an angle with the latter it, with a driving device producing the closing and opening motion of the deep rolling apparatus as well as the deep rolling force, and where there is provided an axial guide roller which has a diameter that is slightly smaller than the space between two oil collars of a main or crank pin journal of a crankshaft and which has a distance to the plane containing the axes of rotation of the two support rollers, wherein for a scissor-like type construction of the deep rolling apparatus an the axial guide roller is provided on the deep rolling roller head and is centered relative to the deep rolling roller head thereto, its axis of rotation being perpendicular to the axis of rotation of the crankshaft and having a diameter that is slightly less than the distance between two lubricators of a main axle journal or lobe axle iournal of the crankshaft forms a sharp angle with a common plane of the axes of the two support rollers.

Claim 2. (Currently Amended) Deep rolling apparatus of a deep rolling machine for crankshafts in which two arms cross from each other bear a deep rolling roller-head or a supporting roller head, whereby the supporting roller head is provided with two supporting rollers having parallel axis axes and the deep rolling roller-head is provided with at least one deep rolling work roller whose axis of rotation has the same

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direction as the axis of rotation of the crankshaft and encloses forms an angle with the latter it, with a drive direction that produces driving device producing the closing and opening motion of the deep rolling device apparatus as well as the deep rolling force, and where there is provided an axial guide roller which has a diameter that is slightly smaller than the space between two oil collars of a main or crank pin journal of a crank shaft and which has a distance to the plane containing the axes of rotation of the two support rollers, wherein for a compact seissor-like-construction of the deep rolling apparatus in which the two arms are connected to each other via a yoke, an axial guide roller is provided on the yoke and is centered relative to the deep rolling roller head, whose whereby its axis of rotation is perpendicular to the axis of rotation of the crankshaft and has a diameter that is slightly less than the distance between two lubricators of a main axle journal or a lobe axle journal of the crankshaft is parallel to the plane containing the axes of rotation of the two support rollers.

Claim 3. Cancelled.

Claim 4. (Previously Presented) Deep rolling apparatus as in claim 1, wherein the axial guide roller is cylindrical or crowned on the outside.

Claim 5. (Currently Amended) Deep rolling apparatus as in claim 1, wherein the axial guide roller or the sliding body is made on form of comprises a pair of rollers or a pair of sliding bodies.